

Con. 9723-13.

GS-1219

(3 Hours)

[Total Marks : 100

N.B. : (1) Answer any **five** questions out of **seven**.(2) Each question carries **equal** marks.

1. (a) Explain ATM Adaptation layer giving details of different classes of traffic. 10
(b) Explain X.25 protocol stack, detailing operation of X.25/3 (Network layer). 10
2. (a) What are the advantages of MPLS compared to IP over ATM ? Explain MPLS switching using level stacking. 10
(b) Explain SNMP MIB structure by giving example. Also explain different types of messages exchanged. 10
3. (a) Explain how reservation in the Intserv model is carried out using RSVP protocol. What are different RSVP messages sent ? 10
(b) Explain the operating principle of DWDM technology. 10
4. (a) What are the requirements of a Backbone Network Design ? 10
(b) What is the role of subnet mask in classless as well as classbase IP routing ? Explain with the help of examples. 10
5. (a) How traffic characteristics affect the network design while doing capacity planning ? 10
(b) Explain why unicasting routing protocols are not used for multicasting. Explain any one multicasting routing protocol in detail. 10
6. (a) Write a connection oriented socket program for client server communication in either C++ or Java. 10
(b) Compare and contrast IP V4 with IPV6. 10
7. Short note on any **four** :— 20
 - (a) H. 323
 - (b) SONET/SDH
 - (c) M/M/1 Queuing theory
 - (d) BGP
 - (d) B-ISDN reference model.